AMENDMENTS TO CLAIMS

This listing of claims will replace all prior versions, or listings, of claims in this application.

1. (currently amended) A targeted thermotherapy system for treating disease material in a patient, the system comprising:

a) a bioprobe or a bioprobe system comprising a susceptor;

b) an alternating magnetic field (AMF) inducing inductor that produces an AMF to energize the susceptor; and

c) a generator coupled to the AMF inducing inductor to provide power to the AMF inducing inductor.

2. (currently amended) The system according to claim 1, wherein ~~the inductor comprises an~~ AMF inducing inductor ~~having~~ comprises a core defining at least part of a magnetic circuit, the core having two poles, the two poles of the core defining a gap therebetween, and a magnetic field passing between the two poles.

3. (currently amended) The system according to claim 1, wherein the AMF inducing inductor comprises a coil that surrounds a patient and has at least one turn.

4. (currently amended) The system according to claim 1, wherein the AMF inducing inductor comprises a coil placed dorsal or anterior to a patient.

5. (currently amended) The system according to claim 1, wherein the AMF inducing inductor comprises at least one gradient coil of a nuclear magnetic resonance imaging (MRI) system.

6. (currently amended) The system according to claim 5, wherein the AMF inducing inductor comprises a plurality of gradient coils of ~~a~~ an MRI system switched sequentially to generate the AMF.

7. (currently amended) The system according to claim 5, wherein the AMF inducing inductor comprises a plurality of gradient coils of ~~a~~ an MRI system, the plurality of gradient coils being switched sequentially to generate a rotating AMF.

8. (original) The system according to claim 1, further comprising at least one pair of pulse modulators, wherein the at least one pair of pulse modulators is coupled to the inductor in opposite polarity to produce an alternating current in the inductor.

9. (currently amended) The system according to claim 1, wherein the ~~magnetic~~ AMF inducing inductor comprises:

a. a circular rotor; and

b. at least two magnets attached to or mounted on the circular rotor to create a magnetic flux, wherein there is a gap between the magnets, and wherein the circular rotor rotates around a target located within the gap.

10. (original) The system according to claim 9, wherein the circular rotor builds a return path for the magnetic flux of the magnets.

11. (original) The system according to claim 9, wherein the circular rotor is fabricated from a low magnetic reluctance material.

12. (original) The system according to claim 1, wherein the bioprobe comprises one or more ligands.

13. (original) The system according to claim 1, wherein the bioprobe comprises one or more antibodies.

14. (original) The system according to claim 13, wherein the antibody comprises AC10, HeFi1 derivatives of AC10 and HeFil, 19D9D6 Monoclonal Antibody, MV833, HuMV833, anti-cytokeratin AE1/3, anti-CAM5.2, M170, chimeric M170, Votumumab, Mab 88BV59, ABX-EGF, HuMax-EGFr, h-R3, 4B5-H, ABX-MA1, MDX-010, Mab-1A7, ACA-125, R1549, Pemtumomab, MuHMFgl, HuHMFgl, Mab-B42.13, Ov, VB2-011, H-11 ScFv, Novo Mab-G2ScFv, Bevacizumab, rhuMAb-VEGF, SGN-15, cBR96, Pertuzumab, rhuMAb 2C4, Mab AR20.5, R1550, huHMFG1, ING-1, huLM609, Mab-MEDI-522, huLM609, or a combination thereof.

15. (original) The system according to claim 1, wherein the bioprobe comprises antifibrin.

16. (currently amended) The system according to claim 1, wherein the ~~bioprobe~~ susceptor comprises iron oxide.

17. (original) The system according to claim 1, further comprising one or more bioprobes.

18. (original) The system according to claim 17, wherein the bioprobes are distinct from one another.

19. (original) A therapeutic method for treating the body, body part, tissue, cell, or body fluid of a subject, comprising:

a. administering targeted thermotherapy to a target by supplying a bioprobe to the target and exposing the bioprobe to an alternating magnetic field (AMF), and

b. administering at least one other therapy to the target,

wherein the at least one other therapy is administered prior to, during, after the targeted thermotherapy administration, or a combination thereof.

20. (original) The therapeutic method according to claim 19, wherein administering the at least one other therapy comprises administering a sensitizing drug that induces the coagulation in the vasculature of a tumor.

21. (original) A therapeutic method according to claim 20, wherein the sensitizing drug comprises monophosphoryl lipid A (MPL), monocyte chemoattractant protein-1 (MCP-1), platelet-derived growth factor-BB (PDGF-BB), C-reactive protein (CRP), tumor necrosis factor-α (TNF-α) or an inducer TNF-α, a Racl antagonist, DMXAA, CM101 or thalidomide, muramyl dipeptide (MDP), threonyl-MDP or MTPPE, anti- angiogenic agent, vasculostatin, canstatin or maspin, VEGF inhibitor, anti-VEGF blocking antibody, VEGF receptor construct (sVEGF-R), tyrosine kinase inhibitor, antisense VEGF construct, anti-VEGF RNA aptamer, anti-VEGF ribozyme, antibody that binds to the cell surface activating antigen CD40, sCD40-Ligand (sCD153), combretastatin A-1, A-2, A-3, A-4, A-5, A-6, B-1, B-2, B-3, B-4, D-1 or D-2, thalidomide, or a combination thereof.

22. (original) A therapeutic method according to claim 20, wherein the sensitising drug comprises an antibody, antigen-binding region, monoclonal, recombinant, human, part-human, humanized or chimeric antibody or antigen-binding region, monoclonal, recombinant, human, part human, humanized or chimeric antibody, or antigen-binding region, scFV, Fv, Fab', Fab, diabody, linear antibody or F (ab') 2, ligand, growth factor or receptor, VEGF receptor, FGF receptor, TGF-β receptor, TIE, VCAM-1, ICAM-1, P-selectin, E-selectin, PSMA, pleiotropin, endosialin or endoglin, fibronectin, scatter factor/hepatocyte growth factor (HGF), platelet factor 4 (PF4), PDGF, or a combination thereof.

23. (original) A therapeutic method according to claim 19, wherein the at least one other therapy comprises hyperthermia.

24. (original) A therapeutic method according to claim 23, wherein the hyperthermia comprises RF eddy current, light, direct RF or microwave radiation, alternating or direct currents, induction of thermal seeds, thermal baths of hot or warm water, oils or other solutions, induction of non-targeted particles, ionising radiation, or any combination thereof.

25. (original) A therapeutic method according to claim 19, wherein the at least one other therapy comprises monoclonal antibody therapy.

26. (original) A therapeutic method according to claim 19, wherein the at least one other therapy comprises radiation therapy.

27. (original) A therapeutic method according to claim 26, wherein the radiation therapy comprises radio immunotherapy, and wherein the radio immunotherapy comprises use of a radionuclide comprising Molybdenum-99, Technetium-99m, Chromium-51, Copper- 64, Dysprosium-165, Ytterbium-169, Indium-111, Iodine-125, Iodine-131, Iridium-192, Iron-59, Phosphorus-32, Potassium-42, Rhodium 186, Rhenium-188, Samarium-153, Selenium-75, Sodium-24, Strontium-89, Xenon-133, Xenon-127, and Yttrium- 90 or a combination thereof.

28. (original) The therapeutic method according to claim 26, wherein the radiation therapy is radio immunotherapy, and wherein the radio immunotherapy comprises use of a radionuclide associated with a monoclonal antibody or a bioprobe of the targeted thermotherapy system.

29. (original) The therapeutic method according to claim 19, wherein the at least one other therapy comprises chemotherapy.

30. (currently amended) The therapeutic method according to claim 29, wherein the chemotherapy comprises administering a drug or agent, wherein the drug or agent comprises an S phase- dependent antimetabolics, capercitabine, cytarabine, doxorubicin, fludarabine, floxuridine, fluorouracil, gemcitabine, hydroxyurea, mercaptopurine, methotrexate, prednisone, procarbazine, thioguanine, M phase-dependent vinca alkaloids, vinblastine, vincristine, vinorelbine, podophyllotoxins, etoposide, teniposide, taxanes, doxetaxel, paxlitaxel, G2 ~~pase~~ phase-dependent, bleomycin, irinotecan, mitoxantrone, topotecan, Gl ~~pase~~ phase-dependent, asparaginase, corticosteroids, alkylating agents, nitrogen mustards, mechlorethamine, mustargen, cyclophosphamide, ifosfamide (Ifex), and chlorambucil, leukeran, nitrosoureas, platinum agents, cisplatin, platinol, carboplatin, paraplatin, antimetabolites, natural therapeutic products,

antitumor antibiotics, bleomycin, anthracyclines, epipodophyllotoxins, vinca alkaloids, taxanes, camptothecin, or a combination thereof.

31. (original) The therapeutic method according to claim 29, wherein the chemotherapy comprises administering a drug or agent, wherein the drug or agent is associated with a monoclonal antibody or to the bioprobe.

32. (original) The therapeutic method according to claim 29, wherein the chemotherapy comprises administering a drug or agent associated with the bioprobe, wherein the drug or agent is activated during AMF exposure by being released from the bioprobe.

33. (original) The therapeutic method according to claim 29, wherein the chemotherapy comprises administering a drug or agent, wherein the drug or agent is destroyed when exposed to the AMF.

34. (original) The therapeutic method according to claim 29, wherein the bioprobe comprises a coating, and wherein the chemotherapy comprises administering a drug or agent that is intercalated into the coating of the bioprobe.

35. (original) The therapeutic method according to claim 19, wherein the at least one other therapy comprises pharmaceutical therapy.

36. (original) The therapeutic method according to claim 35, wherein the pharmaceutical therapy comprises one or more vasopermeation enhancement agents.

37. (original) The therapeutic method according to claim 19, wherein the at least one other therapy comprises surgery, minimally invasive surgery, or an interventional technique.

38. (original) The therapeutic method according to claim 37, further comprising surgically preparing an organ to be lifted outside the body while the organ continues to being anatomically and physiologically attached to the body, and extracorporeally irradiating the organ with the AMF.

39. (original) The therapeutic method according to claim 19, wherein the at least one other therapy comprises bone marrow or stem cell transplantation.

40. (original) The therapeutic method according to claim 19, wherein the at least one other therapy comprises administering Bevacizumab, rhuMAb-VEGF, BMS-275291, Celecoxib, EMD121974, rhEndostatin, cetuximab, Interferon-oc, LY317615, AE-941, PTK787, SU6668, SU11248, Thalidomide, ZD1839, ZD6474, or a combination thereof.

41. (original) A therapeutic method according to claim 19, wherein the at least one other therapy comprises photodynamic therapy.

42. (original) The therapeutic method according to claim 41, wherein the photodynamic therapy comprises administering at least one photodynamic particle which comprises a silica- based or other optically activated nanoparticle with a magnetic core, and a drug, wherein the at least one photodynamic particle is irradiated with light to activate the drug.

43. (original) The therapeutic method according to claim 42 wherein the at least one photodynamic particle and bioprobes are injected into the patient separately and activated simultaneously.

44. (original) The therapeutic method according to claim 42, wherein the at least one photodynamic particle and bioprobes are injected into the patient separately and activated separately.

45. (original) A therapeutic method, comprising:

a. administering targeted thermotherapy to a body, body part, or tissue of a subject containing a tumor, by supplying a bioprobe to the body, body part or tissue and exposing the bioprobe to an alternating magnetic field (AMF), and

b. destroying or inhibiting the vascularity of the body, body part or tissue in response to exposure to the AMF.

46. (original) The therapeutic method according to claim 45, further comprising administering at least one other therapy to the body, body part or tissue.

47. (original) The therapeutic method according to claim 46, further comprising administering an agent, the agent comprising a sensitizing drug that induces the coagulation of the vasculature in a tumor.

48. (original) The therapeutic method according to claim 47, wherein the sensitizing drug comprises monophosphoryl lipid A (MPL), monocyte chemoattractant protein-1 (MCP-1), platelet-derived growth factor-BB (PDGF-BB), C-reactive protein (CRP), tumor necrosis factor-α (TNF-α) or an inducer TNF-α, a Racl antagonist, DMXAA, CM101 or thalidomide, dipeptide (MDP), threonyl-MDP or MTPPE, anti-angiogenic agent, vasculostatin, canstatin or maspin, VEGF inhibitor, anti-VEGF blocking antibody, VEGF receptor construct (sVEGF-R), tyrosine kinase inhibitor, antisense VEGF construct, anti-VEGF RNA aptamer, anti-VEGF ribozyme, antibody that binds to the cell surface activating antigen CD40, sCD40-Ligand

(sCD153), combretastatin A-1, A-2, A-3, A-4, A-5, A-6, B-1, B-2, B-3, B-4, D-1, or D-2, thalidomide, or a combination thereof.

49. (original) The therapeutic method according to claim 47, wherein the sensitising drug comprises an antibody, antigen-binding region, monoclonal, recombinant, human, part-human, humanized or chimeric antibody or antigen-binding region, scFV, Fv, Fab', Fab, diabody, linear antibody or $F(ab')_2$ ligand, growth factor or receptor, VEGF receptor, FGF receptor, TGF-β receptor, TIE, VCAM-1, ICAM-1, P-selectin, E-selectin, PSMA, pleiotropin, endosialin or endoglin, fibronectin, scatter/hepatocyte growth factor (HGF), platelet factor 4 (PF4), PDGF, or a combination thereof.

50. (original) The therapeutic method according to claim 46, wherein the at least one other therapy comprises hyperthermia.

51. (original) The therapeutic method according to claim 50, wherein the hyperthermia comprises RF eddy current, light, direct RF or microwave radiation, alternating or direct currents, induction of thermal seeds, thermal baths of hot or warm water, oils or other solutions, induction of non-targeted particles, ionising radiation, or any combination thereof.

52. (original) The therapeutic method according to claim 46, wherein the at least one other therapy comprises monoclonal antibody therapy.

53. (original) The therapeutic method according to claim 52, wherein the monoclonal antibody therapy comprises administering an antibody, and wherein the antibody comprises AC10, HeFi1, derivatives of AC10 and HeFil, 19D9D6 Monoclonal Antibody, MV833, HuMV833, Anti-cytokeratin AE1/3, anti-CAM5.2, M170, chimeric M170, Votumumab, Mab 88BV59, ABX-EGF, HuMax-EGFr, h-R3, 4B5-H, ABX-MA1, MDX-010, Mab-1A7, ACA-125, R1549, Pemtumomab, MuHMFgl, HuHMFgl, Mab-B42.13, Ov, VB2-011, H-11, ScFv, Novo Mab-G2ScFv, Bevacizumab, rhuMAb-VEGF, SGN-15, cBR96, Pertuzumab, rhuMAb 2C4, Mab AR20.5, huLM609, huHMFG1, ING-1, huLM609, Mab-MEDI-522, huLM609, or a combination thereof.

54. (original) The therapeutic method according to claim 46, wherein the at least one other therapy comprises radiation therapy.

55. (currently amended) The therapeutic method according to claim 54, wherein the radiation therapy comprises radio immunotherapy, and wherein the radio immunotherapy comprises administering a radionuclide which comprises of Molybdenum-99, Technetium-99m,

Chromium-51, Copper-64, Dysprosium-165, Ytterbium-169, Indium-111, Iodine-125, Iodine-131, Iridium-192, Iron-59, Phosphorus-32, Potassium-42, Rhodium 186, Rhenium-188, Samarium-153, Selenium-75, Sodium-24, Strontium-89, Xenon-133, Xenon-127, and Yttrium-90, or a combination ~~hereof~~ thereof.

56. (currently amended) The therapeutic method according to claim 54, wherein the radiation therapy comprises radio immunotherapy, and wherein the radio immunotherapy comprises administering a radionuclide bound to a monoclonal antibody or the bioprobe.

57. (original) The therapeutic method according to claim 46, wherein the at least one other therapy comprises chemotherapy.

58. (currently amended) The therapeutic method according to claim 57, wherein the chemotherapy comprises administering a drug or agent, wherein the drug or agent comprises an S phase- dependent antimetabolics, capercitabine, cytarabine, doxorubicin, fludarabine, floxuridine, fluorouracil, gemcitabine, hydroxyurea, mercaptopurine, methotrexate, prednisone, procarbazine, thioguanine, M phase-dependent vinca alkaloids, vinblastine, vincristine, vinorelbine, podophyllotoxins, etoposide, teniposide, taxanes, doxetaxel, paxlitaxel, G2 ~~pase~~ phase-dependent, bleomycin, irinotecan, mitoxantrone, topotecan, Gl ~~pase~~ phase-dependent, asparaginase, corticosteroids, alkylating agents, nitrogen mustards, mechlorethamine, mustargen, cyclophosphamide, ifosfamide (Ifex), and chlorambucil, leukeran, nitrosoureas, platinum agents, cisplatin, platinol, carboplatin, paraplatin, antimetabolites, natural therapeutic products, antitumor antibiotics, bleomycin, anthracyclines, epipodophyllotoxins, vinca alkaloids, taxanes, camptothecin, or a combination thereof.

59. (original) The therapeutic method according to claim 57, wherein the chemotherapy comprises administering a drug or agent, wherein the drug or agent is associated with a monoclonal antibody or the bioprobe.

60. (original) The therapeutic method according to claim 57, wherein the chemotherapy comprises administering a drug or agent, wherein the drug or agent is activated during the AMF exposure by being released from the bioprobe.

61. (original) The therapeutic method according to claim 57, wherein the chemotherapy comprises administering a drug or agent, wherein the drug or agent is destroyed upon exposure to the AMF.

62. (original) The therapeutic method according to claim 57, wherein the chemotherapy comprises administering a drug or agent, wherein the drug or agent is intercalated into a coating of the bioprobe.

63. (original) The therapeutic method according to claim 46, wherein the at least one other therapy comprises pharmaceutical therapy.

64. (original) The therapeutic method according to claim 63, wherein the pharmaceutical therapy comprises administering one or more vasopermeation enhancement agents.

65. (original) The therapeutic method according to claim 46, wherein the at least one other therapy comprises surgery, minimally invasive surgery, or an interventional technique.

66. (original) The therapeutic method according to claim 65, further comprising surgically preparing an organ to be lifted outside the body, while the organ continues to being anatomically and physiological attached to the body, and extracorporeally exposing the organ to the AMF.

67. (original) The therapeutic method according to claim 46, wherein at least one other therapy comprises bone marrow or stem cell transplantation.

68. (original) The therapeutic method according to claim 46, wherein the at least one other therapy comprises administering Bevacizumab, BMS-275291, Celecoxib, EMD121974, rhEndostatin, cetuximab, Interferon-α, LY317615, AE-941, PTK787, SU6668, SU11248, Thalidomide, ZD1839, ZD6474, or a combination thereof.

69. (original) The therapeutic method according to claim 46, wherein the at least one other therapy comprises photodynamic therapy.

70. (original) The therapeutic method according to claim 69, wherein the photodynamic therapy comprises administering at least one photodynamic particle which comprises a silica- based or other optically activated nanoparticle with a magnetic core, and a drug, and irradiating the at least one photodynamic particle with light to activate the drug.

71. (original) The therapeutic method according to claim 70, further comprising introducing the at least one photodynamic particle and the bioprobes to the body, body part or tissue separately and activating the at least one photodynamic particle and bioprobe either simultaneously or separately from one another.

72. (original) A therapeutic method for treating the body, body part, tissue, cell, or body fluid of a subject, comprising:

a) medically imaging the body, body part, tissue, cell or body fluid; and

b) administering targeted thermotherapy by introducing a bioprobe to the body, body part, tissue, cell or body fluid of the subject and exposing the bioprobe to an alternating magnetic field (AMF),

wherein the administering the targeted thermotherapy occurs prior to, during, or after the medical imaging, or a combination thereof.

73. (original) The therapeutic method according to claim 72, wherein medically imaging the body, body part, tissue, cell or body fluid comprises use of magnetic resonance imaging, x- ray imaging, positron emission tomography, single photon emission computed tomography, bioimpedance measurements, radioimmunological imaging, or a combination thereof.

74. (original) The therapeutic method according to claim 73, wherein the radioimmunological imaging comprises administering to the patient at least one radionuclide, and wherein the radionuclide comprises Molybdenum-99, Technetium-99m, Chromium-51, Copper-64, Dysprosium-165, Ytterbium-169, Indium-111, Iodine-125, Iodine-131, Iridium-192, Iron-59, Phosphorus-32, Potassium-42, Rhodium 186, Rhenium-188, Samarium-153, Selenium-75, Sodium-24, Strontium-89, Xenon-133, Xenon-127, or Yttrium-90 or a combination of these radionuclides.

75. (original) The therapeutic method according to claim 74, wherein the medical imaging comprises administering to the patient at least one radionuclide, the at least one radionuclide being attached to the bioprobe.

76. (original) The therapeutic method according to claim 73, wherein the medical imaging comprises magnetic resonance imaging (MRI), and the bioprobe comprises antifibrin and is gadolinium-labeled.

77. (original) The therapeutic method according to claim 72, further comprising administering at least one other therapy, wherein the at least one other therapy comprises hyperthermia, direct antibody therapy, radiation therapy, chemotherapy or pharmaceutical therapy, photodynamic therapy, surgical therapy, interventional therapy, bone marrow or stem cell transplantation, or a combination thereof.

78. (original) A magnetic material composition, comprising:

a. a particle having magnetic properties and forming a single magnetic domain;

b. a biocompatible coating material for the particle; and

c. a ligand selective to at least one disease material marker associated with disease material, the ligand being i) bound to an uncoated portion of the particle, ii) bound to a coated portion of the particle, iii) bound to the particle and partially covered by the coating or iv) intercalated into the coating.

79. (original) The magnetic particle composition of claim 78, wherein the biocompatible coating material is biodegradable.

80. (original) The magnetic particle composition of claim 78, wherein the particle has a size of no more than about 250 nm in at least one dimension.

81. (original) The magnetic material composition of claim 78, wherein the particle, the coating and the ligand are suspended in a biologically compatible fluid.

82. (original) The magnetic material composition of claim 78, wherein the magnetic particle is ferromagnetic, antiferromagnetic, ferrimagnetic, antiferrimagentic, or superparamagnetic.

83. (original) A magnetic material composition of claim 78, wherein the magnetic particle comprises an iron oxide prepared via a synthetic process, natural process, or a combination thereof.

84. (original) A magnetic material composition of claim 83, wherein the iron oxide is prepared by biologically induced mineralization, boundary organized biomineralization, or a combination thereof.

85. (original) A magnetic material composition of claim 84, wherein the boundary organized biomineralization process occurs in one species of magnetotactic bacteria.

86. (original) A magnetic material composition of claim 78, wherein the magnetic particle has a Curie temperature in the range of from about 40° C to about 150° C.

87. (original) A magnetic material composition of claim 78, wherein the magnetic particle is formed of a biocompatible material, and wherein the surface of the magnetic particle forms the biocompatible coating.

88. (original) A magnetic material composition of claim 78, wherein the biocompatible coating material is an organic material, an inorganic material, or a combination thereof.

89. (original) A magnetic material composition of claim 88, wherein the organic material is a synthetic material, a biological material, or a combination thereof

90. (original) A magnetic material composition of claim 89, wherein the synthetic material is a polymer, a copolymer, or a combination thereof.

91. (original) A magnetic material composition of claim 89, wherein the synthetic material comprises at least a polymer, a copolymer, or a polymer blend formed from a polymer based on at least one of acrylates, siloxanes, styrenes, acetates, alkylene glycols, alkylenes, alkylene oxides, parylene, lactic acid, and glycolic acid.

92. (original) A magnetic material composition of claim 89, wherein the synthetic material comprises a hydrogel polymer, a histidine-containing polymer, a surfactant, or a combination thereof.

93. (original) A magnetic material composition of claim 89, wherein the biological material comprises at least one of a polysaccharide, a polyaminoacid, a protein, a lipid, a glycerol, a fatty acid, and a combination thereof.

94. (original) A magnetic material composition of claim 93, wherein the polysaccharide includes a heparin, heparin sulfate, chondroitin sulfate, chitin, chitosan, cellulose, dextran, alginate, starch, saccharide, carbohydrate, glycosaminoglycan, or a combination thereof.

95. (original) A magnetic material composition of claim 93, wherein the protein includes an extracellular matrix protein, proteoglycan, glycoprotein, albumin, peptide, gelatin, or a combination thereof.

96. (original) A magnetic material composition of claim 88, wherein the inorganic material includes a metal, a metal alloy, a ceramic, an oxide of a Group IV element, or a combination thereof.

97. (original) A magnetic material composition of claim 96, wherein the ceramic includes hydroxyapatite, silicon carbide, carboxylate, sulfonate, phosphate, ferrite, phosphonate, or a combination thereof.

98. (original) A magnetic material composition of claim 89, wherein the biological material is a transfection agent to enhance uptake by cancer cells.

99. (original) A magnetic material composition of claim 98, wherein the transfection agent includes a vector, a prion, a polyaminoacid, a cationic liposome, an amphiphile, a non- liposomal lipid, or a combination thereof.

100. (currently amended) A magnetic material composition of claim 99, wherein the vector includes a plasmid, a virus, a phage, a ~~viron~~ virion, a viral coat, or a combination thereof.

101. (original) A therapeutic method according to claim 19, wherein the targeted thermotherapy is administered using a targeted thermotherapy system that comprises a plurality of different bioprobes or bioprobe systems, a magnetic generator, and an inductor.

102. (original) A therapeutic method according to claim 19, wherein the method is utilized for the treatment of a cancer, AIDS, adverse angiogenesis, cardiovascular plaque, vascular plaque, calcified plaque, vulnerable plaque, restenosis, amyloidosis, tuberculosis, obesity, malaria, and illnesses due to viruses.

103. (original) A magnetic material composition, comprising:

a. a bioprobe, the bioprobe comprising a particle having magnetic properties associated with a first therapy, and a ligand selective to at least one disease material marker associated with a disease material; the ligand being associated with the particle; and

b. an agent associated with a second therapy, the agent being associated with the bioprobe.

104. (currently amended) The composition of claim 103, wherein the agent comprises a radiotherapeutic agent[[,]].

105. (original) The composition of claim 104, wherein the radiotherapeutic agent comprises a radionuclide.

106. (original) The composition of claim 103, wherein the agent comprises a chemotherapeutic agent.

107. (original) The composition of claim 103, wherein the agent comprises a pharmaceutical agent.

108. (original) The composition of claim 103, wherein the agent comprises a photodynamic agent.

109. (original) The composition of claim 103, wherein the bioprobe further comprises a coating.

110. (original) The composition of claim 103, wherein the bioprobe forms a single domain.